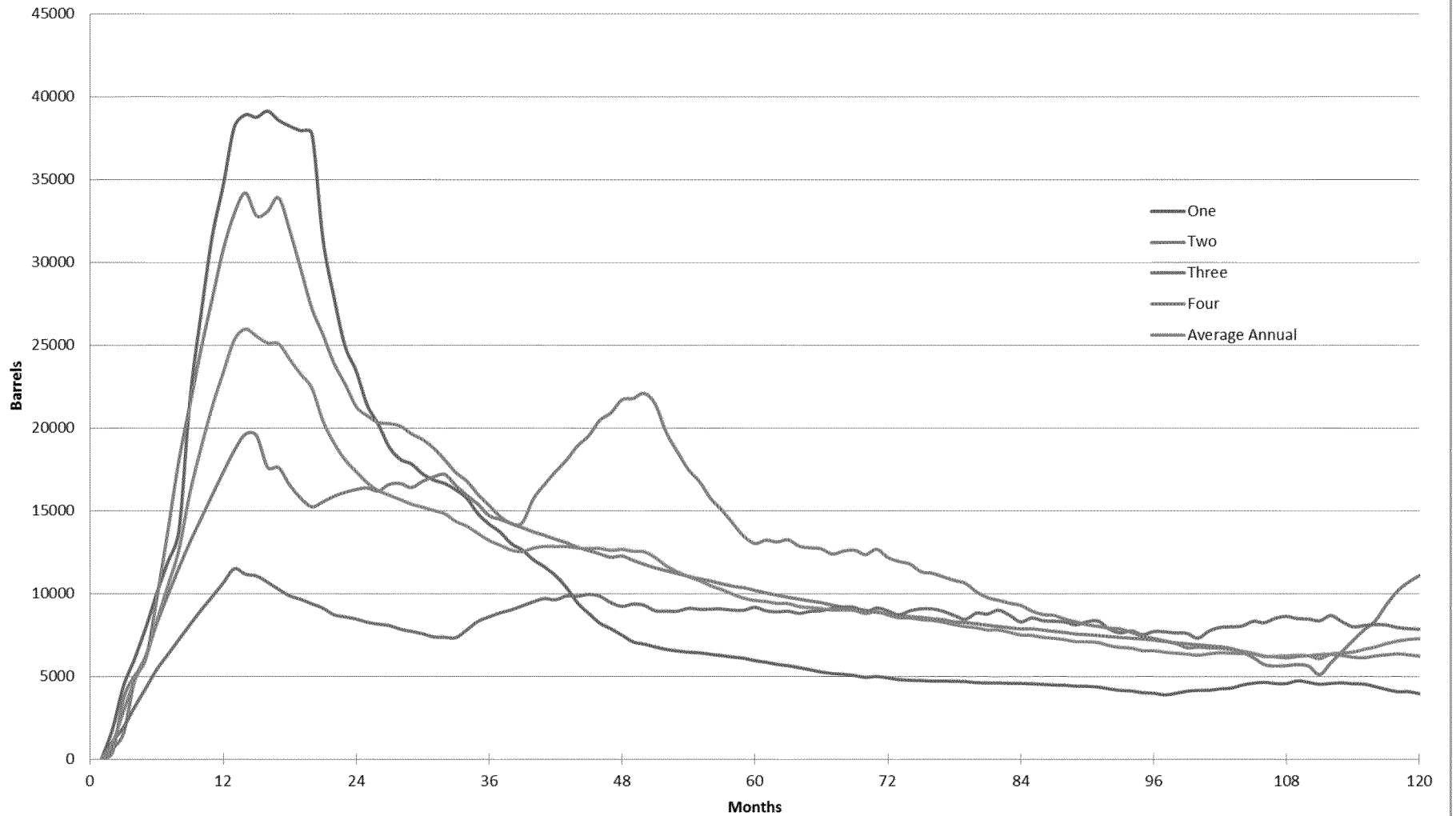


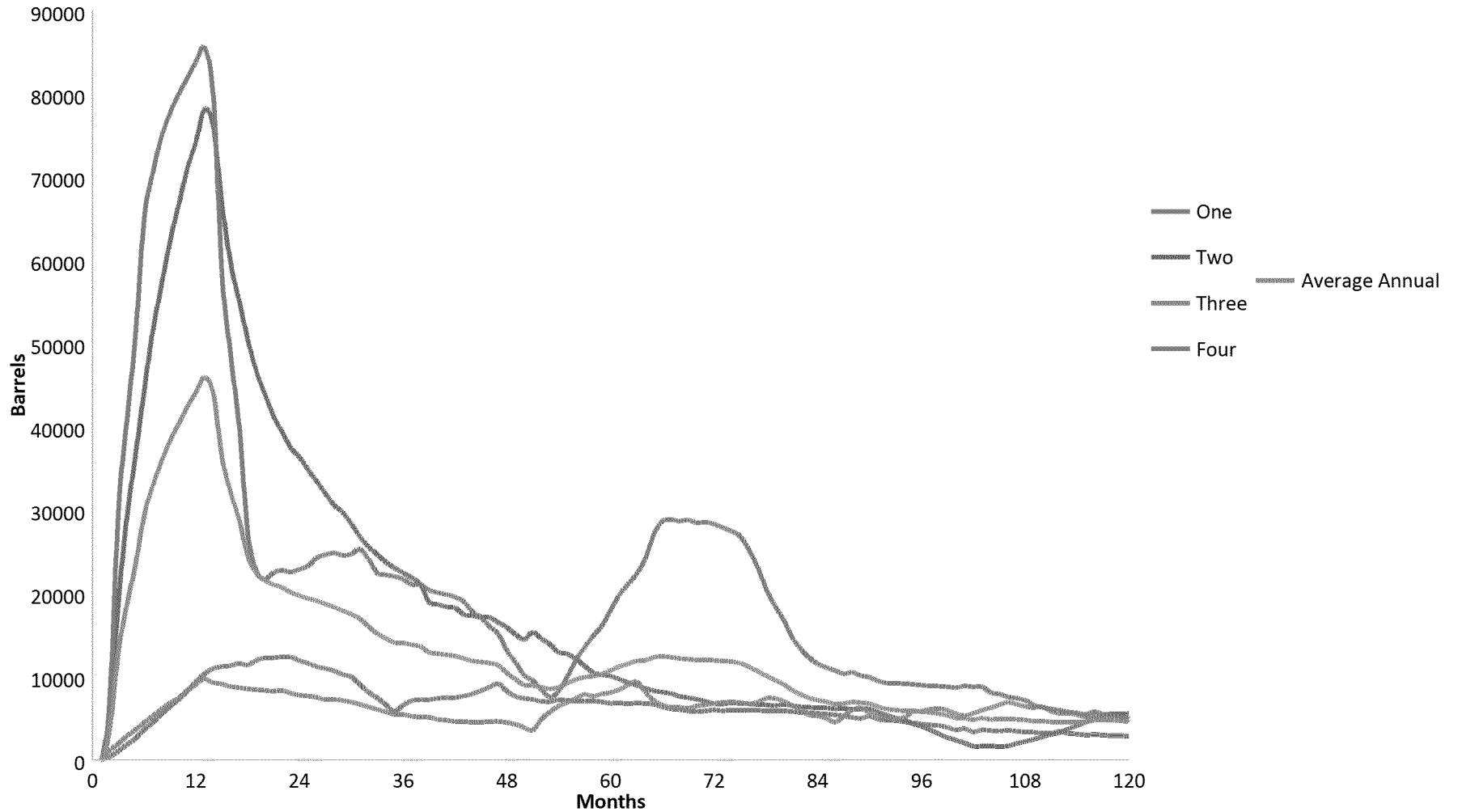
Combustor BACT Analysis

Bluebell Annual Throughput

(12 month rolling average)



Altamont Annual Throughput (12 month rolling average)



Capital Costs

Direct Costs

	Company A	Company B	Revised B	Company C	Company D	Average
Combustor	\$11,930.00	\$27,000.00	\$18,000.00	\$15,000.00	\$16,700.00	\$17,726.00
Shipping	\$341.00	\$2,500.00	Included	\$3,265.00	\$1,000.00	\$1,776.50
Taxes	\$205.00	\$793.00	included	\$1,959.00	\$1,704.00	\$1,165.25
Total	\$12,476.00	\$30,293.00	\$18,000.00	\$20,224.00	\$19,404.00	\$20,079.40

Installation Costs

	Company A	Company B	Revised B	Company C	Company D	Average
Surface Equipment	\$8,234.00	\$19,700.00	\$9,000.00	\$17,650.00	\$8,500.00	\$12,616.80
Cementing	\$499.00	\$2,000.00	included	included	\$800.00	\$1,099.67
Safety (Painting, Crane Rental etc.)	\$250.00	\$5,500.00	included	included	\$3,800.00	\$3,183.33
Total	\$8,983.00	\$27,200.00	\$9,000.00	\$17,650.00	\$13,100.00	\$15,186.60

Indirect Costs

	Company A	Company B	Revised B	Company C	Company D	Average
Engineering	\$1,248.00	\$4,670.00	\$2,700.00	\$2,400.00	\$1,000.00	\$2,403.60
Construction	\$2,495.00	\$4,670.00		\$12,000.00	\$6,000.00	\$6,291.25
Startup	\$125.00	\$467.00	\$270.00	\$1,800.00	\$1,500.00	\$832.40
Contractor Fee	\$1,248.00	\$11,200.00		\$1,500.00		\$4,649.33
Contingency	\$801.00	\$1,600.00		\$5,557.00	\$2,000.00	\$2,489.50
Testing	\$125.00					\$125.00
Installation			\$24,000.00			\$24,000.00
Total	\$6,042.00	\$22,607.00	\$26,970.00	\$23,257.00	\$10,500.00	\$17,875.20

Annual Costs

	Direct Costs					
	Company A	Company B	Revised B	Company C	Company D	Average
Maintenance (hrs @ \$)	104 @ \$20	121 @ \$35	121 @ \$35	N/A		N/A
Cost of Maintenance	\$2,392.00	\$4,258.00	\$4,258.00	N/A	\$3,000.00	\$3,477.00
Materials	\$2,288.00	\$4,258.00	\$4,258.00	N/A	\$1,200.00	\$3,001.00
Gas Cost		\$1,700.00	\$1,700.00	N/A	\$3,000.00	\$2,133.33
Replacement Parts					\$1,500.00	\$1,500.00
Total	\$4,680.00	\$10,216.00	\$10,216.00	\$10,000.00	\$8,700.00	\$8,762.40

	Indirect Costs					
	Company A	Company B	Revised B	Company C	Company D	Average
Overhead	\$4,992.00	\$5,110.00	\$5,110.00		\$5,000.00	\$5,053.00
Administrative Charges	\$550.00	\$1,586.00	\$1,080.00		\$1,500.00	\$1,179.00
Insurance	\$275.00	\$793.00	\$540.00			\$536.00
Property Tax	\$275.00		\$540.00			\$407.50
	\$6,092.00	\$7,489.00	\$7,270.00	N/A	\$6,500.00	\$6,837.75

Capital Recovery and Annualized Capital Cost

	Company A	Company B	Revised B	Company C	Company D	Average
CAPITAL RECOVERY FACTOR (CRF)	0.163	0.174	0.174	0.163	0.174	0.163
Life of Control	10 yrs	9 yrs	9 yrs	10 yrs	9 yrs	10 yrs

$$\text{where CRF} = \frac{i(1+i)^n}{(1+i)^n - 1}$$

i = interest rate (10%)
n = number of years

	Company A	Company B	Revised B	Company C	Company D	Average
Total Capital Costs	\$27,501.00	\$80,100.00	\$53,970.00	\$61,131.00	\$43,004.00	\$53,141.20
Total Annualized Capital	\$4,482.66	\$13,908.56	\$9,390.78	\$9,964.35	\$7,482.70	\$8,662.02
Total Annual Maintenance Cost	\$10,772.00	\$17,705.00	\$17,486.00	\$10,000.00	\$15,200.00	\$14,232.60
Total Annual (Maintenance + Annualized Capital)	\$15,254.66	\$31,613.56	\$26,876.78	\$19,964.35	\$22,682.70	\$22,894.62

Cost per ton Removed

	Company A	Company B	Revised B	Company C	Company D	Average
Total Annual (Maintenance + Annualized Capital)	\$15,254.66	\$31,613.56	\$26,876.78	\$19,964.35	\$22,682.70	\$22,894.62

Assuming 95% removal

Emissions (tpy)

Cost per ton Removed

	Company A	Company B	Revised B	Company C	Company D	Average
6	\$2,676.26	\$5,546.24	\$4,715.22	\$3,502.52	\$3,979.42	\$4,016.60
5.5	\$2,919.55	\$6,050.44	\$5,143.88	\$3,820.93	\$4,341.19	\$4,381.74
5	\$3,211.51	\$6,655.49	\$5,658.27	\$4,203.02	\$4,775.30	\$4,819.92
4.5	\$3,568.34	\$7,394.99	\$6,286.97	\$4,670.02	\$5,305.89	\$5,355.47
4	\$4,014.39	\$8,319.36	\$7,072.84	\$5,253.78	\$5,969.13	\$6,024.90
3.5	\$4,587.87	\$9,507.84	\$8,083.24	\$6,004.32	\$6,821.86	\$6,885.60
3	\$5,352.51	\$11,092.48	\$9,430.45	\$7,005.04	\$7,958.84	\$8,033.20

Estimated Emissions Related Throughputs

		AP-42 Emission Related Throughputs											
		32000	22000	18000	15000	14000	13000	12000	11000	10000	9000	8000	7000
# of Tanks		VOC Emissions (tpy)											
6		12.76	9.63	8.33	7.32	6.98	6.64	6.29	5.93	5.57	5.21	4.83	4.44
5		12.26	9.18	7.91	6.94	6.61	6.27	5.93	5.59	5.24	4.88	4.52	4.15
4		11.71	8.71	7.47	6.52	6.20	5.88	5.55	5.22	4.88	4.54	4.19	3.84
3		11.12	8.19	6.99	6.07	5.76	5.45	5.13	4.81	4.49	4.16	3.83	3.49
2		10.45	7.61	6.44	5.56	5.26	4.96	4.66	4.36	4.05	3.74	3.42	3.10

		Company D Emission Related Throughputs											
		32000	22000	18000	15000	14000	13000	12000	11000	10000	9000	8000	7000
Annaul throughput # of Tanks		VOC Emissions (tpy)											
6		8.70	5.98	4.90	4.08	3.81	3.54	3.27	2.99	2.72	2.45	2.18	1.91
5		8.70	5.98	4.90	4.08	3.81	3.54	3.26	2.99	2.72	2.45	2.18	1.91
4		8.70	5.98	4.89	4.08	3.81	3.54	3.26	2.99	2.72	2.45	2.18	1.90
3		8.70	5.98	4.89	4.08	3.81	3.54	3.26	2.99	2.72	2.45	2.18	1.90
2		8.69	5.98	4.89	4.08	3.81	3.53	3.26	2.99	2.72	2.45	2.18	1.90